Irvine Ranch CWD STP R8-2004-0107

To be placed into CDF Tool:

BOD5 @ 20 Deg. C, Percent Removal

Irvine Ranch CWD STP R8-2004-0107

M-001

Phosphorus, Total (as P)	1 / Month	mg/L
Nitrogen, Total (as N)	1 / Month	mg/L
Oil and Grease	1 / Month	mg/L
Sulfide, Total (as S)	1 / Month	mg/L
Total Suspended Solids (TSS)	1 / Month	mg/L
Total Suspended Solids (TSS)	1 / Month	mg/L
Flow	1 / Day	MGD

M-003		
Chronic Toxicity (Species 1)	1 / Month	TUc
Chronic Toxicity (Species 1)	1 / Month	TUc
Bis (2-Ethylhexyl) Phthalate	1 / Month	ug/L
Phosphorus, Total (as P)	1 / Month	mg/L
Hardness, Total (as CaCO3)	1 / Month	lb/day
Hardness, Total (as CaCO3)	1 / Month	mg/L
Total Dissolved Solids (TDS)	1 / Month	mg/L
Total Organic Carbon (TOC)	1 / Month	mg/L
Nitrogen, Total (as N)	1 / Month	mg/L
Total Kjeldahl Nitrogen (TKN) (as N)	1 / Month	mg/L
Nitrogen, Total Inorganic (as N)	1 / Month	mg/L
Sulfate, Total (as SO4)	1 / Month	lb/day
Sulfate, Total (as SO4)	1 / Month	mg/L
Sodium, Total Recoverable	1 / Month	lb/day
Sodium, Total Recoverable	1 / Month	mg/L
Nitrate, Total (as N)	1 / Month	mg/L
Fluoride, Total	1 / Month	mg/L
Chloride	1 / Month	lb/day
Chloride	1 / Month	mg/L
Carbonate Ion (as CO3)	1 / Month	mg/L
Calcium, Total Recoverable	1 / Month	mg/L
Boron, Total Recoverable	1 / Month	mg/L
Bicarbonate Ion (as HCO3)	1 / Month	mg/L
Ammonia, Total (as N)	1 / Month	lb/day
Ammonia, Total (as N)	1 / Month	mg/L
Temperature	1 / Week	Degrees C
Total Coliform	1 / Day	MPN/100 mL
Chemical Oxygen Demand (COD)	1 / Day	mg/L

1 / Month %

Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. Total Suspended Solids (TSS), Percent Removal Total Suspended Solids (TSS) Total Suspended Solids (TSS) Total Suspended Solids (TSS) Total Suspended Solids (TSS) Chlorine, Total Residual Turbidity pH Electrical Conductivity @ 25 Deg. C	C) 1 / Day C) 1 / Day	lb/day mg/L lb/day mg/L % lb/day mg/L lb/day mg/L NTU SU umhos/cm MGD
M-004		
Chronic Toxicity (Species 1)	1 / Month	TUc
Chronic Toxicity (Species 1)	1 / Month	TUc
Bis (2-Ethylhexyl) Phthalate	1 / Month	ug/L
Phosphorus, Total (as P)	1 / Month	mg/L
Hardness, Total (as CaCO3)	1 / Month	lb/day
Hardness, Total (as CaCO3)	1 / Month	mg/L
Total Dissolved Solids (TDS)	1 / Month 1 / Month	mg/L
Total Organic Carbon (TOC)	1 / Month	mg/L
Nitrogen, Total (as N) Total Kjeldahl Nitrogen (TKN) (as N)	1 / Month	mg/L mg/L
Nitrogen, Total Inorganic (as N)	1 / Month	mg/L
Sulfate, Total (as SO4)	1 / Month	lb/day
Sulfate, Total (as SO4)	1 / Month	mg/L
Sodium, Total Recoverable	1 / Month	lb/day
Sodium, Total Recoverable	1 / Month	mg/L
Nitrate, Total (as N)	1 / Month	mg/L
Fluoride, Total	1 / Month	mg/L
Chloride	1 / Month	lb/day
Chloride	1 / Month	mg/L
Carbonate Ion (as CO3)	1 / Month	mg/L
Calcium, Total Recoverable	1 / Month	mg/L
Boron, Total Recoverable	1 / Month	mg/L
Bicarbonate Ion (as HCO3)	1 / Month	mg/L
Ammonia, Total (as N)	1 / Month	lb/day
Ammonia, Total (as N)	1 / Month	mg/L
Temperature	1 / Week	Degrees C
Total Coliform	1 / Day	MPN/100 mL
Chemical Oxygen Demand (COD)	1 / Day	mg/L
BOD5 @ 20 Deg. C, Percent Removal	1 / Month	%
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg.	C) 1 / Day	lb/day
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg.	C) 1 / Day	mg/L

Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Total Suspended Solids (TSS), Percent Removal Total Suspended Solids (TSS) Total Suspended Solids (TSS) Total Suspended Solids (TSS) Total Suspended Solids (TSS) Chlorine, Total Residual Turbidity pH Electrical Conductivity @ 25 Deg. C Flow	1 / Day 1 / Day 1 / Month 1 / Day 1 / Day 1 / Day 1 / Day 1 / Day 2 / Day 1 / Day 1 / Day	Ib/day mg/L % Ib/day mg/L Ib/day mg/L NTU SU umhos/cm MGD
M-005		
Flow	1 / Day	MGD
Electrical Conductivity @ 25 Deg. C	1 / Day	umhos/cm
рН	2 / Day	SU
Turbidity	1 / Day	NTU
Chlorine, Total Residual	1 / Day	mg/L
Total Suspended Solids (TSS)	1 / Day	mg/L
Total Suspended Solids (TSS)	1 / Day	lb/day
Total Suspended Solids (TSS)	1 / Day	mg/L
Total Suspended Solids (TSS)	1 / Day	lb/day
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	1 / Day	mg/L
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	1 / Day	lb/day
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	1 / Day	lb/day
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	1 / Day	mg/L
Chemical Oxygen Demand (COD)	1 / Day	mg/L
Total Coliform	1 / Day	MPN/100 mL
Temperature	1 / Week	Degrees C
Ammonia, Total (as N)	1 / Month	mg/L
Bicarbonate Ion (as HCO3)	1 / Month	mg/L
Boron, Total Recoverable	1 / Month	mg/L
Calcium, Total Recoverable	1 / Month	mg/L
Carbonate Ion (as CO3)	1 / Month	mg/L
Chloride	1 / Month	mg/L
Fluoride, Total	1 / Month	mg/L
Nitrate, Total (as N)	1 / Month	mg/L
Sodium, Total Recoverable	1 / Month	lb/day
Sodium, Total Recoverable	1 / Month	mg/L
Sulfate, Total (as SO4)	1 / Month	mg/L
Nitrogen, Total Inorganic (as N)	1 / Month	mg/L
Total Kjeldahl Nitrogen (TKN) (as N)	1 / Month	mg/L
Nitrogen, Total (as N)	1 / Month	mg/L
Total Organic Carbon (TOC)	1 / Month	mg/L
Total Dissolved Solids (TDS)	1 / Month	mg/L
Hardness, Total (as CaCO3)	1 / Month	mg/L

Phosphorus, Total (as P) Bis (2-Ethylhexyl) Phthalate Chronic Toxicity (Species 1) Chronic Toxicity (Species 1) Total Suspended Solids (TSS), Percent Removal BOD5 @ 20 Deg. C, Percent Removal Chloride Sulfate, Total (as SO4) Hardness, Total (as CaCO3)	1 / Month 1 / Month	mg/L ug/L TUc TUc % % lb/day lb/day lb/day
M-INF Bis (2-Ethylhexyl) Phthalate Total Kjeldahl Nitrogen (TKN) (as N) Nitrogen, Total Inorganic (as N) Ammonia, Total (as N) Total Dissolved Solids (TDS) Total Suspended Solids (TSS) Chemical Oxygen Demand (COD) Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) pH Electrical Conductivity @ 25 Deg. C Flow	1 / Month 1 / Month 1 / Month 1 / Month 1 / Month 1 / Day 1 / Day 2 / Day 1 / Day 1 / Day	ug/L mg/L mg/L mg/L mg/L mg/L mg/L SU umhos/cm
R-003D Nitrogen, Total (as N) Total Kjeldahl Nitrogen (TKN) (as N) Nitrogen, Total Inorganic (as N) Ammonia, Total (as N) Temperature Chlorine, Total Residual R-004D Nitrogen, Total (as N) Total Kjeldahl Nitrogen (TKN) (as N) Nitrogen, Total Inorganic (as N) Ammonia, Total (as N) Temperature Chlorine, Total Residual	1 / Week	mg/L mg/L mg/L Degrees C mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/

Narratives:

M-003

Total Dissolved Solids (TDS): The limit that results in the lower concentration shall be controlling: (1) The running 12-month average concentration for TDS shall not exceed 720 mg/l and the 12-month average mass emission rate shall not exceed 108,086 lbs/day and (2) The 12-month running average TDS concentration shall not exceed the

12-month running average TDS concentration in the water supply by more than 250 mg/l. (Final requirement effective null - null)[All year]

Total Coliform: The number of total coliform bacterial shall not exceed an MPN of 23 per 100 ml in more than one sample in any calendar month. (Final requirement effective null - null)[All year]

Total Coliform: The running average weekly concentration of total coliform measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 ml. The average weekly concentration shall be evaluated using the median of the bacteriological results of the last seven days. (Final requirement effective null - null)[All year]

Turbidity: Filtered wastewater must meet either (1) or (2). (1) Has been coagulated and passed through natural undisturbed soilds or a bed of filter media pursuant to the following: (a) at a rate that does not exceed 5 GPM/square foot of surface area in mono, dual, or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 GPM/square foot of surface area in traveling bridge automatic backwash filters, based on peak dry weather design flow; and (b) the turbidity of filtered water does not exceed (i) an average of 2 NTU within any calendar day; (ii) 5 NTU more than 5 percent of the time within any calendar day; and (iii) 10 NTU at any time. (2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or RO membrane such that turbidity of filtered water does not exceed (a) 0.2 NTU more than 5 percent of the time within any calendar day; and (b) 0.5 NTU at any time. (Final requirement effective null - null)[All year]

pH: No individual excursion from the range of pH values of 6.5 to 8.5 s.u. shall exceed 60 minutes. (Final requirement effective null - null)[All year]

pH: The total time during which the pH values are outside the required range of 6.5 to 8.5 s.u. shall not exceed 7 hours and 26 minutes in any calendar month. (Final requirement effective null - null)[All year]

Flow: The discharge of recycled water into Sand Canyon Reservoir is only allowed when the reservoir surface water elevation is below 176.5 feet above mean sea level or in January, February, October, November, December. (Final requirement effective null - null)[All year]

M-004

Total Dissolved Solids (TDS): The limit that results in the lower concentration shall be controlling: (1) The running 12-month average concentration for TDS shall not exceed 720 mg/l and the 12-month average mass emission rate shall not exceed 108,086 lbs/day and (2) The 12-month running average TDS concentration shall not exceed the 12-month running average TDS concentration in the water supply by more than 250 mg/l. (Final requirement effective null - null)[All year]

Total Coliform: The number of total coliform bacterial shall not exceed an MPN of 23 per 100 ml in more than one sample in any calendar month. (Final requirement effective null - null)[All year]

Total Coliform: The running average weekly concentration of total coliform measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 ml. The average weekly concentration shall be evaluated using the median of the bacteriological results of the last seven days. (Final requirement effective null - null)[All year]

Turbidity: Filtered wastewater must meet either (1) or (2). (1) Has been coagulated and passed through natural undisturbed soilds or a bed of filter media pursuant to the following: (a) at a rate that does not exceed 5 GPM/square foot of surface area in mono, dual, or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 GPM/square foot of surface area in traveling bridge automatic backwash filters, based on peak dry weather design flow; and (b) the turbidity of filtered water does not exceed (i) an average of 2 NTU within any calendar day; (ii) 5 NTU more than 5 percent of the time within any calendar day; and (iii) 10 NTU at any time. (2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or RO membrane such that turbidity of filtered water does not exceed (a) 0.2 NTU more than 5 percent of the time within any calendar day; and (b) 0.5 NTU at any time. (Final requirement effective null - null)[All year]

pH: No individual excursion from the range of pH values of 6.5 to 8.5 s.u. shall exceed 60 minutes. (Final requirement effective null - null)[All year]

pH: The total time during which the pH values are outside the required range of 6.5 to 8.5 s.u. shall not exceed 7 hours and 26 minutes in any calendar month. (Final requirement effective null - null)[All year]

M-005

Total Dissolved Solids (TDS): The limit that results in the lower concentration shall be controlling: (1) The running 12-month average concentration for TDS shall not exceed 720 mg/l and the 12-month average mass emission rate shall not exceed 108,086 lbs/day and (2) The 12-month running average TDS concentration shall not exceed the 12-month running average TDS concentration in the water supply by more than 250 mg/l. (Final requirement effective null - null)[All year]

Turbidity: Filtered wastewater must meet either (1) or (2). (1) Has been coagulated and passed through natural undisturbed soilds or a bed of filter media pursuant to the following: (a) at a rate that does not exceed 5 GPM/square foot of surface area in mono, dual, or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 GPM/square foot of surface area in traveling bridge automatic backwash filters, based on peak dry weather design flow; and (b) the turbidity of filtered water does not exceed (i) an average of 2 NTU within any calendar day; (ii) 5 NTU more than 5 percent of the time within any calendar day; and (iii) 10 NTU at any time. (2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or RO membrane such that turbidity of filtered water does not exceed (a) 0.2 NTU more than 5 percent of the time within any calendar day; and (b) 0.5 NTU at any time. (Final requirement effective null - null)[All year]

pH: The total time during which the pH values are outside the required range of 6.5 to 8.5 s.u. shall not exceed 7 hours and 26 minutes in any calendar month. (Final requirement effective null - null)[All year]

pH: No individual excursion from the range of pH values of 6.5 to 8.5 s.u. shall exceed 60 minutes. (Final requirement effective null - null)[All year]

Total Coliform: The running average weekly concentration of total coliform measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 ml. The average weekly concentration shall be evaluated using the median of the bacteriological results of the last seven days. (Final requirement effective null - null)[All year]

Total Coliform: The number of total coliform bacterial shall not exceed an MPN of 23 per 100 ml in more than one sample in any calendar month. (Final requirement effective null - null)[All year]

Pre-Calculated:

M-003

Chloride<=150.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for chloride shall not exceed 150 mg/l.

Chloride<=22518.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for chloride shall not exceed 22,518 lbs/day.

Sodium, Total Recoverable<=125.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for sodium shall not exceed 125 mg/l.

Sodium, Total Recoverable<=18765.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for sodium shall not exceed 18,765 lbs/day.

Sulfate, Total (as SO4)<=240.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for sulfate shall not exceed 240 mg/l.

Sulfate, Total (as SO4)<=36029.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for sulfate shall not exceed 36,029 lbs/day.

Hardness, Total (as CaCO3)<=380.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for total hardness shall not exceed 380 mg/l.

Hardness, Total (as CaCO3)<=57046.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate shall not exceed 57,046 lbs/day.

M-004

Chloride<=150.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for chloride shall not exceed 150 mg/l.

Chloride<=22518.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for chloride shall not exceed 22,518 lbs/day.

Sodium, Total Recoverable<=125.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for sodium shall not exceed 125 mg/l.

Sodium, Total Recoverable<=18765.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for sodium shall not exceed 18,765 lbs/day.

Sulfate, Total (as SO4)<=240.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for sulfate shall not exceed 240 mg/l.

Sulfate, Total (as SO4)<=36029.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for sulfate shall not exceed 36,029 lbs/day.

Hardness, Total (as CaCO3)<=380.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for total hardness shall not exceed 380 mg/l.

Hardness, Total (as CaCO3)<=57046.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate shall not exceed 57,046 lbs/day.

M-005

Chloride<=150.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory

measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for chloride shall not exceed 150 mg/l.

Sodium, Total Recoverable<=18765.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for sodium shall not exceed 18,765 lbs/day.

Sodium, Total Recoverable<=125.0* mg/L, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Composite. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The running 12-month average concentration for sodium shall not exceed 125 mg/l.

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Chloride<=22518.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate for chloride shall not exceed 22,518 lbs/day.

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Hardness, Total (as CaCO3)<=57046.0* lb/day, Limit Basis: Other, Sampling Frequency: 1 / Month, Sampling Type: Calculate. (final requirement effective since the beginning of this regulatory measure to the end of this regulatory measure) [All Year] The 12-month average mass emission rate shall not exceed 57,046 lbs/day.

Raw Data:

M-003, M-004, M-005

Chronic Toxicity (Species 1)

1 / Month TUc